

AUG 28 2006
PATENTS
10/814,029
DOCKET 8156**REMARKS****Status of the Claims**

In the Office Action, claims 1 – 20 were noted as pending in the application. All claims stand rejected. Claim 21 is newly presented.

A. Summary of Cited References

Before addressing the Examiner's rejections, a brief summary of the cited references is provided.

Novak, et. al. - U.S. Patent Publication Number 2003/0126599

Novak relates to an editing device that allows a user to access a media program and designate excerpts, or sections, of the media program by generating bookmarks that correspond to time or positional indexes in the program. Abstract. The bookmarks can then be sent via a network device to others so that the others can experience the original user's designated excerpts without having to review the entire program. Id. The other users apply the bookmarks to a different version, or copy, of the program than the original user does, thereby avoiding copyright infringement. Page 2, par. [0033]. Thus, bandwidth is not used transmitting the actual program content over a network. Id.

B. Rejection of Claims under 35 U.S.C. § 103(a).

Applicant respectfully submits that the subject matter of the claims patentably distinguish over the cited references. Under MPEP § 2142, for an examiner to establish a *prima facie* case of obviousness, "three basic criteria must be met. First, there must be some suggestion or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art, to modify the reference or to combine reference teachings. Second, there must be a reasonable expectation of success. Finally, the prior art reference (or references when combined) must teach or suggest all the claim limitations. The teaching or suggestion to make the claimed combination and the reasonable expectation of success must both be found in the prior art, and not based on Applicant's disclosure." If any of these three criteria are not met, the Examiner has not met the burden of establishing a *prima facie* case of obviousness, and the rejection should be withdrawn.

Furthermore, each dependent claim includes all of the limitations of the independent claim from which it depends. If an independent claim is non-obvious under

PATENTS

10/814,029

DOCKET 8156

35 U.S.C. § 103, then any claim depending therefrom is non-obvious. MPEP §2143.03, citing In re Fine, 837 F.2d 1071 (Fed. Cir. 1988). Applicant respectfully submits that the burden of establishing a *prima facie* case of obviousness has not been met.

C. Rejection of Claims 1 and 11 under 35 U.S.C. § 103(a)

Regarding the rejection of independent claim 1, claim 1 claims "... broadband communication circuitry for receiving the multimedia content in a broadband format and extracting the content from the broadband format by stripping broadband protocol format information; and decoder circuitry for receiving the content from the broadband communication circuitry, for decoding the content according to the type of content received and providing the decoded content to at least one user device based on the type of content."

As discussed in the previous office action:

Novak does not disclose these elements. In Novak, multimedia content is accessed from a DVD or from encoded television content received from a cable television network or a direct broadcast satellite system. Page 2, pars. [0036] – [0038]. The encoding discussed in Novak is typically MPEG coding known in the art. Page 3, par [0048] – [0050]. Claim 1 in the present application claims extracting content from a broadband content signal, and then decoding the encoded content. In other words, the device claimed in claim 1 strips away the broadband signal protocol format information that envelopes the content information, and then decodes the remaining encoded content, which may include MPEG encoded content, for example. Novak does not disclose the element of stripping away the broadband signal protocol information as claimed in claim 1, and discussed at page 9, lines 3-13 of the present application. Examiner acknowledges that Novak does not disclose the element of stripping away the broadband signal protocol information in the office action

However, Examiner states that Applicant's 'Admitted Prior Art' discloses this. Applicant points out that Applicant has not admitted and is not admitting herein anything as being prior art. For purposes of discussion, Applicant refers herein to the 'reference' to the cited specification portion as 'allegedly admitted prior art' ("AAPA"). In the AAPA, Applicant states that a DOCSIS format translator 34 strips incoming messages of the DOCSIS format information, as known in the art.

PATENTS
10/814,029
DOCKET 8156

It will be appreciated, however, that DOCSIS as defined in the reference 'DOCSIS Radio Frequency Interface Specification SP-RFIv2.0-I03-021218' does not teach encapsulating various types of content other than data into a common DOCSIS format. Since Examiner has asserted that Applicant's reference to the DOCSIS process of stripping broadband information from a message as being known in the art is equivalent to admitting prior art, Applicant provides analysis of the reference DOCSIS specification, which Examiner made of record and stated provides evidence of further DOCSIS aspects. An aspect of DOCSIS is the stripping of broadband information from a DOCSIS DATA message, as stated in the application. However, this aspect is not what is being claimed in claim 1.

As shown in FIG. 2 of the reference DOCSIS specification, in the downstream (transmit ("Tx")) direction a combiner combines data and video, the video signals being provided to the combiner in their native format 6 MHz channels. The video is provided to the combiner in 6 MHz channels within the 50 – 880 MHz spectrum, and the CMTS provides QAM modulated data, also in one or more 6 MHz channels in the 50 – 880 MHz range, but separate from the channels used for video channels. Thus, according to the DOCSIS specification video, a type of multimedia, and data are not both encapsulated in the DOCSIS protocol format. Only data is formatted by the CMTS in the DOCSIS protocol format.

In contrast, FIG. 1 of the present application shows that the CMTS 22 is coupled directly via network 4 to network interface device 6. "... CMTS 22 ... formats requested content into a DOCSIS message and transmits the message downstream to device 6. Page 8, lines 1-3. "CMTS 22 can receive any type of content ... " Page 8, line 4. "The content is then converted into DOCSIS-format messages/signals and transported from CMTS 22 to a requesting user at the user's network interface device 6." Page 8, lines 4-8. Thus, the CMTS converts requested multimedia content into DOCSIS format messages, rather than just combining DOCSIS data from a CMTS with 6 MHz video channels having content that is not formatted according to DOCSIS.

The passage in the application referring to stripping the DOCSIS format information from incoming DOCSIS messages as being known in the art states that the process of stripping DOCSIS format information from an incoming DOCSIS message is

PATENTS
10/814,029
DOCKET 8156

known in the art. However, this statement is not prior art to the subject matter of claims 1 and/or 11. One skilled in the art knows that DOCSIS is used for delivering data messages from a head end to a cable modem, but one skilled in the art does not appreciate DOCSIS being used for transporting content other data. Indeed, as defined in the Background section of the application, the acronym DOCSIS stands for Data Over Cable Service Interface Specification. Thus, the statement in the application referring to stripping "DOCSIS format information, as known in the art . . ." refers to stripping DOCSIS header information from incoming data messages.

A central idea of the claims in the application is that multiple types of content, including video, are formatted into a broadband format, which format may include DOCSIS, and transported via DOCSIS, for example, over a single network to a single device. Thus, for example, channels containing video signals are not merely combined with a DOCSIS channel before transporting over the network, but are actually formed into DOCSIS message signals before being transported, along with data, in one or more DOCSIS channels. Newly presented claim 21 more simply claims this aspect by showing that downstream content converges into the CMTS, and is all transported, via the CMTS formatting all content into broadband-formatted messages, toward the subscriber's device.

Such formatting of differing types of content into DOCSIS messages before transmitting to a subscriber is not referred to in the application as prior art. Such formatting is not disclosed in Novak. Such formatting is not disclosed in the DOCSIS specification document, which is made of record. All that is referred to in the application as being known in the art is the process of stripping DOCSIS formatting information from a received DOCSIS data message. What is new is combining multiple types of content streams into one or more DOCSIS message streams at the CMTS located at the head end. This is not disclosed in the references.

In claim 1, the claim claims "... receiving the multimedia content in a broadband format and extracting the content from the broadband format by stripping broadband protocol format information" In the specification multimedia content is described as video and audio, voice and data services. Page 5, lines 9-10. As shown in the DOCSIS specification reference, only data is processed into a broadband format at the CMTS

PATENTS
10/814,029
DOCKET 8156

before being combined with video content already formed into standard 6 MHz video channel signals (in the U.S.; other countries may use different spectrum bandwidths) and transmitted downstream to a user. Claim 1 distinguishes over the references because video, as well as data and voice, are processed according to DOCSIS before being transmitted down stream. This happens before the DOCSIS signals are received at a DOCSIS device at a subscriber's premises, where a system according to claim 1 is located.

Thus, because Novak does not disclose processing according to DOCSIS as stated by Examiner in the office action and because DOCSIS teaches away from processing video traffic according to DOCSIS - but teaches adding such traffic to DOCSIS-processed data - the references, including AAPA, do not disclose the claimed elements found in claim 1. As discussed above, AAPA refers generally to the DOCSIS process of stripping broadband format information from a message. However, AAPA does not disclose that the message includes content other than data. The references do not include all of the claimed elements, claim 1 patentably distinguishes over the references, including AAPA. Furthermore, the DOCSIS specification document reference teaches away from the claimed subject matter. Thus, there is not a suggestion to combine the references because there is actually a suggestion not to combine. Therefore, there cannot be a likelihood of success in combining the references. Withdrawal of the rejection is respectfully requested. Similar analysis applies with respect to claim 11 and newly presented claim 21. Withdrawal of the rejection and allowance are respectfully requested there for.

D. The dependent claims are not Obvious over the Cited References

Claims 2-5 and 7-19 are rejected under 35 U.S.C. § 103(a) over Novak in view of AAPA. The claims addressed in this section are dependent claims, and depend from independent claims that are not obvious under 35 U.S.C. § 103 as discussed above. Therefore, under MPEP §§2142 §2143.03, these dependent claims patentably distinguish over the references and withdrawal of the rejection is respectfully requested. However, further analysis is provided with respect to some of the se claims below.

Claim 2 claims cable modem circuitry for "receiving the multimedia content in a broadband format and extracting the content from the broadband format by stripping

PATENTS
10/814,029
DOCKET 8156

broadband protocol format information," the portion in quotes being recited in claim 1, which is included in any claim that depends from claim 1. The cited passage, paragraph [0062], in Novak does not disclose receiving multimedia content with a cable modem. Rather, communication with a cable network 101 that delivers video signals via central location 100 is discussed. Indeed, the passage states that interface 302 may include conventional cable modem circuitry for sending and receiving data apart from receiving standard video signals. There is no mention in the cited passage that the cable modem can also process broadband-formatted video signals through the cable modem. Thus, the use of a cable modem coupled to the CMTS to receive multimedia content in a broadband format and to extract the content from the broadband format by stripping broadband protocol information is not found in the Novak reference. Similar analysis applies with respect to claim 3. Thus, claims 2 and 3 patentably distinguish over the reference. In addition, similar analysis applies with respect to claims 12 -13. Withdrawal of the rejection is respectfully requested.

With respect to claims 4-10, the claims include all of the limitations of the base claim from which they depend. Therefore, the fact that Novak may refer to a digital signal processor, a graphics processor, an audio output, a video output, a hard drive or a connection to an external device does, which Applicant does not concede with respect to similar context vis-à-vis the claimed subject matter, does not render the claims obvious. Novak does not teach the claimed elements processing, or operating on, multimedia content that was received in a broadband format message, which is an element present in all of the dependent claims 4-10. The processor discussed in paragraph [0069] is discussed as controlling, or operating, the STB. The processor in Novak is not disclosed as processing multimedia signals, such as, for example, MPEG signals as discussed in the present application at page 9, lines 6-14. Accordingly, the reference does not disclose all of the elements of the claims. Therefore, the claims patentably distinguish over the reference(s). Withdrawal of the rejection is respectfully requested. Similar analysis applies with respect to claims 14-16. Withdrawal of the rejection is respectfully requested.

With respect to the rejection of claim 17-19, all elements of the claims are not found in the references. For example, Examiner states that Novak discloses using

PATENTS
10/814,029
DOCKET 8156

DOCSIS, therefore using features available through DOCSIS are disclosed therein. Since claim 17 includes all of the elements of the base claim and the further limitation it introduces, DOCSIS aspects are applied to the providing of multimedia content, not just data, as discussed in Novak and in the reference DOCSIS specification. For example, by applying quality of service ("QoS") aspects to a DOCSIS encoded traffic stream, content streams that correspond to low bandwidth signals (a low quality standard definition video signal as compared to a high definition video signal) may be combined before DOCSIS processing into a stream that does not have as high a priority placed on its transmission from the CMTS to the cable modem. If some packets are dropped during transmission, the subscriber may not realize it, since the quality of the original signal is low anyway. High quality signals may be combined into a stream (one stream may be used for a single content program if the bandwidth required is high), or streams, that has/have a higher delivery priority to the subscriber. Thus, low bandwidth programs, such as news programs, black and white reruns, etc, may be placed onto a stream that is assigned a low priority whereas new release movies and live sports event coverage may be assigned to higher priority streams. These aspects are not discussed in Novak or in the DOCSIS specification. Withdrawal of the rejection is respectfully requested.

Regarding the rejection of claim 18, Examiner states that Applicant provides 'evidence' on page 10 that it is common knowledge to use a dynamic service flow MIB to reduce jitter. Although knowledge of the use of a DsX MIB in DOCSIS may be common, it is not common to assign different MIB values to different streams based on the bandwidth to be used for a particular stream in order to reduce jitter. This is because, heretofore, DOCSIS is used for transporting data rather than voice and video. In the transmission of data, jitter is not an issue because if packets are dropped in transmission, they are sent again according to TCP/IP until a web page is complete, for example. However, dropped packets can make a voice message unintelligible, especially if the dropped packets are resent. The same intolerance to jitter applies to the transmission of video too. Thus, it is not common knowledge to use a DsX MIB to reduce jitter in a DOCSIS system. Accordingly, claim 18 patentably distinguishes over the references. Withdrawal of the rejection is respectfully requested.

PATENTS
10/814,029
DOCKET 8156

With respect the rejection of claim 19, the recited elements are not found in the reference(s). Since claim 19 includes all of the limitations of the base claim from which it depends, claim 19 includes the limitation of "... receiving the broadband-formatted digital content signal with broadband communication circuitry" As discussed in the present application, it is known to use dynamic channel change ("DCC") at the CMTS to instruct a connected cable modem to tune to a different channel. However, the application also discusses, and claim 19 claims, that dynamic channel change is used at the broadband communication circuitry as well as at the CMTS. Thus, the broadband communication circuitry, or cable modem, for example, can instruct the CMTS to change channels as well as the CMTS instructing the cable modem to change channels. Page 10, line 24 – page 11, line 3. The present application distinguishes from the use of DCC at the CMTS which "is designed for use at the CMTS," page 11, line 2, and the novel use of DCC at the cable modem, at page 11, line 3. Therefore, the AIPA does not disclose the use of DCC at the cable modem and there is no suggestion to combine the references to arrive at the claimed subject matter. Withdrawal of the rejection is respectfully requested.

Claim 6 is rejected as obvious under 35 U.S.C. sec. 103(a) as being obvious over Novak in view of Brooks, *et. al.*, U.S. patent number 6,816,940. Examiner states that Novak fails to show a bus connecting a MAC of the broadband communication circuitry and a MAC of the decoder circuitry. However, Examiner states that Brooks shows this feature. The passage Examiner cites as disclosing this feature discusses a cable modem CMAC that is used for DOCSIS functionality, and an EMAC, which supports a separate IEEE 802.3 port. This is used for home LAN and Ethernet connections, typically local to the device containing the EMAC.

Such an EMAC for supporting Ethernet or HomeLAN is not the same as a MAC address of a processor that may be used to decode content messages received from a CMTS. Thus, the claimed limitation of interconnecting a MAC of broadband communication circuitry with a MAC of a processor is not disclosed in the Brooks reference. Therefore, the claim patentably distinguishes over the references. Withdrawal of the rejection is respectfully requested.

PATENTS
10/814,029
DOCKET 8156

With respect to claim 20, Examiner rejects the claim as being obvious over U.S. Patent 6,813,643 to Pearlman ("Pearlman") "... in view of common knowledge as supported by applicant's [allegedly] admitted prior art." Examiner correctly states that Pearlman does not disclose components and functions associated with the implementation of a DOCSIS signal transport. However, Examiner incorrectly combines the cited section (page 8, line 22 – page 9, line 6) from the present application with Pearlman. Claim 20 claims "... means for decoding the incoming content into its native format coupled to the media access controller; and means for distributing the decoded content in its native format from the decoding means to one or more of a plurality of output ports according to the native format type." The cited reference does not contain these limitations.

In the Pearlman reference, a device is described that has a switching module that routes an output signal of the QAM tuner 236 to either an MPEG-2 module 234 or DOCSIS module 235 according to whether the signal is video or data, respectively. Col 3, lines 40-62. Then, the signal from either module is provided at a single output. This necessarily means that MPEG signals are treated differently from DOCSIS messages. Moreover, the MPEG video messages are not processed by the DOCSIS module in Pearlman. In contrast, in the present application even if video signals are MPEG-encoded before being formatted in a broadband format, such as DOCSIS, the MPEG-encoded messages and data messages are broadband-formatted, preferably DOCSIS-formatted, and processed by the same DOCSIS format translator 34 shown in FIG. 2. Thus, signals from the QAM tuner 30 are routed to the translator 34, even if they are MPEG content signals, unlike in Pearlman where MPEG signals are routed to a different module than DOCSIS message signals. In Pearlman there are no multimedia content message that are stripped of DOCSIS format information before being processed. In Pearlman, if an incoming messages is a video message, it is already in its native format, thus the need to route the signal flow to the video processor 234 rather than the DOCSIS processor 235. Thus, all of the claimed elements are not found in the references, either alone or in combination. Furthermore, there is not a likelihood of success and there is no suggestion to combine the references to arrive at the claimed invention.

Therefore, all elements of the claims are not found in the references, alone or in combination. Furthermore, there is no suggestion to combine the references to arrive at

AUG 28 2006

PATENTS

10/814,029

DOCKET 8156

the claimed invention, and there not a likelihood of success in arriving at the claimed invention by combining the references. Accordingly, a *prima facie* case of obviousness has not been shown and the claims patentably distinguish over the reference. Withdrawal of the rejection is respectfully requested.

SUMMARY

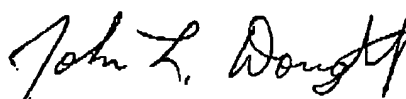
For all the reasons advanced above, Applicant respectfully submits that the application is in condition for allowance and that action is earnestly solicited.

If the Examiner believes that there are any issues that can be resolved by a telephone conference, or that there are any informalities that can be corrected by an Examiner's amendment please contact the undersigned at the mailing address, telephone, facsimile number, or e-mail address indicated below.

Arris International, Inc.
3871 Lakefield Drive
Suwanee, Georgia 30024
(678) 473-8697
(678) 473-8095 - fax
john.doughty@arrisi.com

Respectfully submitted,

Arris International, Inc.



John L. Doughty

Reg. No. 47,533